CLAIMS

1. Oxidised zinc compound in the form of microspherules consisting of smaller unitary particles having a Flodex index of less than 15.

2. Oxidised zinc compound according to Claim 1, characterised in that it has a Flodex index of less than 10.

3. Oxidised zinc compound according to Claim 1 or 2, characterised in that it has a compressibility index [(packed density - apparent density) x 100/packed density] of less than 20%.

4. Oxidised zinc compound according to Claim 3, characterised in that it has a compressibility index of less than 15%.

5. Oxidised zinc compound according to any one of the preceding claims, characterised in that it has a BET specific surface of less than 100 m^2/g.

6. Oxidised zinc compound according to Claim 5, characterised in that it has a BET specific surface of less than 50 m^2/g.

7. Oxidised zinc compound according to any one of the preceding claims, characterised in that the microspherules have a D_{50} (size corresponding to 50% of the total granulometric distribution curve) of between 50 and 200 µm approximately.

8. Oxidised zinc compound according to Claim 7, characterised in that the micro-spherules have a D_{50} of between 50 and 100 µm, preferably between 70 and 90 µm approximately.

9. Oxidised zinc compound according to any one of the preceding claims, characterised in that the micro-spherules consist of smaller unitary particles having a D_{50} of between 1 and 15 µm approximately, without binder.

10. Oxidised zinc compound according to any one of the preceding claims, characterised in that it is chosen from amongst a zinc oxide, a zinc hydroxide, a zinc carbonate, a zinc hydroxycarbonate or a mixture of these.

11. Method of preparing an oxidised zinc compound according to any one of the preceding claims, characterised in that it consists of injecting, by means of a nozzle (6), an aqueous suspension of the said oxidised zinc compound, having a solid matter content of 25% to 70% by weight, at a pressure of 10 to 100 bar approximately, within an atomisation chamber (1), in a stream of gas entering at a temperature of 250° to 800°C approximately and emerging at a temperature of 50° to 300°C approximately.

12. Method according to Claim 11, characterised in that the solid matter content is between 40% and 45% by weight in the aqueous suspension.

13. Method according to Claim 11, characterised in that the aqueous suspension has a solid matter content of between 45% and 70% by weight, and in that a

dispersing agent, such as a polyacrylate, is added to the said suspension.

14. Method according to any one of Claims 11 to 13, characterised in that the injection pressure is between 15 and 80 bar approximately.

15. Method according to any one of Claims 11 to 14, characterised in that the temperature of the gas at the discharge from the atomisation chamber (1) is between 90° and 220°C approximately.

16. Method according to Claim 15, characterised in that the temperature of the gas emerging from the atomisation chamber (1) is between 105° and 170°C approximately.

17. Method according to any one of Claims 11 to 16, characterised in that the gas is air.

18. Use of an oxidised zinc compound according to any one of Claims 1 to 10, or a product according to any one of Claims 11 to 17, in the cross-linking of polymers.

19. Use according to Claim 18, in the vulcanisation of elastomer.

20. Use of an oxidised zinc compound according to any one of Claims 1 to 10, or a product according to any one of Claims 11 to 17, as a pigment or filler, in paints, glass or ceramics.